



Chelmsford Amateur Radio Society

Established 1936

Affiliated to the RSGB
President: Harry Heap G5HF
Secretary: David Bradley M0BQC

Club Call Sign: G0MWT
Chairman: John Bowen G8DET
Treasurer: Brian Thwaites G3CVI

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Web Address: www.g0mwt.org.uk

May 2003

The May Meeting **'Preparing for DXpeditions' by Neville Cheadle G3NUG** **Tuesday 6th. May, 7-30pm at the MASC.**

Have you ever wondered what it takes to organise a DXpedition. We read in RadCom of the achievements but we probably don't give a great deal of thought to the detailed planning. Our May speaker is a master at this!

Neville Cheadle G3NUG is well known in DX circles. He has served in many voluntary capacities on various RSGB Committees and notably as a former Chairman of the HF Committee. Neville is President of CDXC, the Chilton DX Club, now with 600 members, having previously been Chairman for seven years. He has taken part in several DXpeditions worldwide.

The first part of his presentation will tell us about organising an event using the main headings from his recent book "DXpeditioning Behind the Scenes". He will then demonstrate one of the IOTA rigs showing all that's needed to put on a one-man DXpedition anywhere in the world.

Then from one extreme to the other! He will show a video of the largest ever DXpedition ever mounted, that to Comoros as D68C in 2001.

We will be holding our usual raffle, which is being run this time by Martyn EFL/VAM & Chris G0IPU.

Dates for your Diary

6 May CARS Mtg. See above	14 May CARS Comm. Mtg. 7-30pm DVH
11 May Dunstable Downs RC Rally	31 May/1 June "Pickett's Lock" at Stevenage

Congratulations!

Our hearty congratulations to the following Members who successfully completed the recent Foundation Course:- Keith Galley, Robin Emery, Mark Barnaby, Haydn Brace and Gary Lucas.

I'm sure they would like to thank the dedicated course tutors who all deserve our admiration.

Also to Big Jim 2E1GUA/ M3GUA for winning the Silver Award in the 2002 HARIG Challenge.

The Constructors Competition at the June Meeting

Every June we hold a Constructors Competition. Most Members will be only too familiar with the procedure! For the benefit of our newer Members we will explain. The aim is to encourage home construction. There are four cash prizes to be won, one of which is a New Entrants prize. Each one comes with a Certificate, tastefully designed by Colin TRM! In addition the winner is privileged to hold the Roy Martyr Award for the year. For those who didn't know him, Roy was our Club President and the ultimate construction expert of all time.

Entries should have an electrical or electronic flavour and, preferably, have something to do with Amateur Radio! No, we don't expect a PIC controlled transceiver! There are plenty of useful gadgets and items of test gear associated with our hobby suitable for home construction. Some quite simple entries have won the top prize in the past.

There are a few rather elastic rules! Have a few notes about your entry and be prepared to tell us all about it and demonstrate it if possible. The assembled Members are the judges. The votes are counted during the tea break and the winners announced afterwards. So, why not have a go, you never know your luck!

The Chelmsford Amateur Radio Society meets at 7-30 pm on the first Tuesday of the month at the Marconi Athletic and Social Club, Beehive Lane, Chelmsford. For details contact our Secretary: David M0BQC on 01245-602838.

Club Nets: Tuesdays 8-30pm: (2nd) 145.375 (3rd) 1.947 (4th) 28.325 (5th) 145.375 All +/- QRM.

Newsletter Editor: Geoff G7KLV, 64 Vicarage Lane, Gt. Baddow, Chelmsford CM2 8HY 01245-473822

or email: geoff@g7klv.free-online.co.uk

Assistant Newsletter Editor: Colin G0TRM 01245-223835 or email: colinpage@ukgateway.net

Please advise changes of address to Geoff G7KLV.

Last Month's Meeting PicATune by Paul M0CJX.

Paul began his talk by telling us a little about himself and his many interests. Having passed his Morse after many years and being a keen HF man, he wanted to make the very most of his chosen radiator: a long wire antenna. Having tried numerous tuning arrangements he finally decided the right way to tune a long wire was to have the tuner where it should be; at the antenna itself. He searched for a suitable ATU and an automatic one at that. He finally settled on the PicATune as described in the September 2000 Radcom.

Paul gave explained the philosophy of Peter Rhodes G3XJP's excellent design. When Paul made his version he decided to use a plug and socket approach in order to aid testing and maintenance. He designed and organised the manufacture of professional printed boards with solder resist, plated through holes and legend, giving an excellent appearance. Several batches have been made and sold to enthusiastic constructors. In fact, Paul bought with him the remains of the last batch of boards to be made. At the end of the meeting, encouraged by Paul's excellent discourse they were purchased by Club Members, including me!

Using first class overhead slides Paul described the circuit details and the facilities available to the user. Power to the ATU is fed along the coaxial cable from the TX/RX, via a control box or command unit, near the operating position. The power is isolated from the RF path at both ends by suitable capacitors. It is only necessary to transmit briefly for the ATU to tune, and having done so, Morse signals indicate the state of play. Once the lowest VSWR has been obtained all the relevant information such as operating frequency, the specific capacitor and coil tapings is fed to a 32k serial EPROM for later use. Having once tuned to a frequency, the PicATune will remember the settings and return to them in some 15 ms when that frequency is used again. As the device is wholly digital, the main tuning arrangement, based on a standard T-match configuration, is also digital in essence. The main coil is tapped at 1, 2, 4, 8, 16 and 32 turns, selected by relays. Likewise, 11 relays select the appropriate capacitors chosen from the binary sequence in pFs of 1, 2, 4, 8, 16, 32, 64, 128, 256, 512, and 1024 where all or none may be selected. A further two relays can switch the capacitors to the input end of the coil for a low-Z antenna or to the output end for a high-Z antenna. Both relays are left open when only a series L is required. During the tune sequence most of the 10 watts or so of output power is dumped to a dummy load and only a very small amount of the remaining power actually gets to the antenna, hence the PicATune earns its 'Quiet Tune' label. Up to some 250,000 combinations are visited during the sequence to find the best match. Once found the match will be visited again to ensure it is the best available.

The PIC (programmable integrated circuit) which Paul described as 'the heart of the circuit', is available ready programmed and can be purchased from the designer. RF is fed into the PIC, where a frequency counter determines the frequency and hence the band in use. The VSWR information is also fed in with the command line data. There are 19 latching shift registers feeding 19 relays. These relays, fed via Darlington transistors, are used to select the coil tapings and the capacitors. It is also possible to configure relays to select a suitable antenna to suit the chosen operating band. (See below)

Pressing a button on the command unit starts the tune sequence and a standard menu is used which is recognised by the Morse signals sent from the tuner. This menu is known as M U S I C.

M for Make a Match; U for Utilities; S for Status; I for Inhibit; and C for Configure. To choose a mode it is necessary to halt the sequence as the required letter in Morse is heard. To set up a Match the sequence is stopped after M is heard, to find out the Status, it is stopped after S is heard etc. To Configure the output to suit a given antenna, it is stopped after C is heard.

Paul then gave us a very impressive live demonstration of the various modes and explained them all in detail. He was able to show the PicATune, tuning up on different frequencies to a random wire and a counterpoise, without a hitch. He was very pleased with the way his PicATune had performed so reliably during much travelling between numerous demonstrations. Paul was also totally satisfied with its on air performance at his QTH, where he had obtained some spectacular contacts, due entirely to the PicATune's ability to obtain the very best possible match between his TX and his favourite radiator..... a long wire antenna.

Thank you Paul for a very interesting, and stimulating talk.

Report by Colin G0TRM.

Report on Visit to RA Forum at Leeds by Carl G3PEM

I attended the above forum on behalf of CARS. The choice of venue at the Armoury was excellent but it was a long drive from Chelmsford; did I really do this type of journey day after day when I was working!

The welcome introduction to the Forum was given by Alan Betts, Head of Amateur Service in the RA and he gave some statistics on the Foundation Licences. Foundation Licences issued as of 25/03/03 were 6650 of which 3780 are new entrants to the hobby and of these 920 are under 21 years. A later question from the floor indicated that as of 26/03/03 there had been 3000 M3 renewals sent out and of these 99 had failed to renew, 88 of which already hold an Intermediate Licence.

He then gave detailed figures of Amateur Licences issued as of 26/03/03 which were; 'A' Licences 29440, 'B' Licences 22261, Inter. 'A' Licences 2340 and Inter 'B' Licences 2262.

Under the new examination format the first batch of new style Intermediates have taken the examination and the second batch of 150 students are under training. The new full license syllabus is being composed; it will take until summer and then it will be published during the autumn and the first examination will take place May 2004. As there has been a marked decrease in the involvement of the colleges, it is thought likely that as in the case of the Foundation the local clubs and societies will be expected to carry out the training.

Examinations on demand, although very convenient to the candidate, are unlikely to become available. They cost more to run and the RA cannot allocate the resources to score papers and adjust the pass mark dependent upon the difficulty of the questions. The present method of computer selection of questions from the question bank and then adjusting the pass mark according to the severity of the selected questions (ie. the proportion of correct answers received) will be retained as it requires less RA resources to implement.

Internet Link frequency allocation. A resource issue within RA is slowing down the frequency allocation for this service. The priority is to have the new examination structure up and running.

PLT / PLC interference caused by wideband data transmission on the mains power system to the 1.6 to 30 MHz bands. An RA working group issued a report on interference levels. This report can be seen on www.radio.gov.uk by going to the A to Z index and selecting interference. The RA is consulting HF users on the desirable limits but the RSGB points out that the RA is in a cleft stick as it is itself a government department. This administration has the political slogan of 'Broadband Britain', wiring up access via the mains plug seems a good idea. It would be "cheap" for the masses!

The WRC03 Code removal as a licence condition. The UK will vote yes BUT it is a vote of all countries. Brian said he is, maybe, 85/90 % certain of success. However, the vote could be settled in one of three ways; 1) Fail, 2) Vote YES but at a later date for implementation or 3) Vote YES for immediate removal. If the vote is for the latter, a notice in the London Gazette will permit operation on all bands at the power limit that the standard of license allows. No change of callsigns are envisaged. The RA's computer would take some time to upgrade with the new operating conditions. Beacon and Repeater ID will stay as Morse and the CW band plan would stay.

The RSGB President Bob Whelan, G3PJT thanked all the instructors who had given time to the Foundation licence courses. He stated that as the Foundation license examination develops the form of the exam paper may change.

The questions and answers section was too detailed to remember and mention in this write up, although one point stuck in my mind. This was that the National Radiation Board publishes a data sheet on radiation limits from amateur transmitters. This can be seen on their web site.

It should be noted that the RSGB is vigorously pursuing the PLT interference issues.

I have requested a tape of the proceedings and it will be made available for Members to study when I receive it.

RSGB Region 12 Report by Trevor M5AKA

In my capacity as RSGB Deputy Regional Manager I have received some questions from Essex RSGB members about the running of the RSGB. I raised them with the RSGB General Manager Peter Kirby G0TWW and received these replies.

Question: How much was the overall cost to the RSGB to send their contingent to the IARU Region 1 Conference in San Marino last year? What was Peter Kirby doing there as he has no Amateur Radio portfolio within the Society. It is my understanding, that he is employed to manage the business.

Answer: Cost to the RSGB £2.7K. Although the delegation appeared numerically large a number of people in the delegation paid there own way. This included the RA observers and the AMSAT/ARTV rep. It must be remembered that the RSGB is the second largest Society in IARU Region 1 and a major investor in the organization. The RSGB holds most of the key jobs in the Region.

Why was I there? As General Manager I am in effect the Chief Executive of the Society. I have day to day responsibility for all the Society activities, both business and amateur radio.

On the amateur radio front I have a wide brief. I am the only permanent member of the RA/RSGB Forum which is responsible for all policy discussions with the RA, the other members are the President and the Chairman of the ARDC who change. I am the one constant.

I am responsible for all negotiations with the RA on amateur radio matters. I also have responsibility for all discussions with outside agencies, associated government departments and European agencies on amateur radio issues. I am a full and permanent member of IARU Region 1 Eurocom Committee. This Committee's main function is to protect the interests of radio amateurs against legislation coming out of Brussels.

I am the part time secretary of the IARU Region 1 EMC Committee. I am also the appointed RSGB IARU liaison officer. Lastly I am secretary and a trustee of the new RSGB charity the Radio Communications Foundation.

Question: Of all the M3 licenses issued since its inception,

i) how many new members has the RSGB recruited?

ii) how many were existing members, ie 'B' licensees 'upgrading'?

iii) and how many have not joined the RSGB?

Answer: In the first year the Society gained 803 new members.

Class B/Intermediate upgrades totalled 1426.

Completely new licence holders totalled 3060 of which 783 are under 21 years of age.

So if you add that together I guess the percentage of new members picked up is about 18% of M3's. However, you have to factor in those Class B upgrades who are already members and the 783 who are under 21. It must also be remembered that the RSGB does not look upon the Foundation Licence as a fertile recruiting ground for new members. The Foundation Licence is all about the survival and promotion of the hobby.

It the fastest growing licence class ever in the history of amateur radio across the world.

21 countries are considering introducing a licence based on the UK's Foundation Licence.

The total M3 calls on issue today, 6th March 2003, totals 6446.

Question: What is being done about providing more human resources for the QSL Bureau? The large piles of both incoming and outgoing QSL cards, as can be seen in the bureau, and the lengthy delay in receiving cards, indicates a severe lack of investment, yet the bureau is touted by the RSGB as a main selling point to members.

Answer: People have very short memories. Up until 1990 the QSL bureau was run completely by volunteers. The delays were far greater than they are today.

In 1992 (when I took up post) the bureau was only open from 9.15 - 1.00 daily. Today the bureau has exactly the same number of staff that I inherited in 1992, however, the working man hours have been increased so therefore, so has the investment and the bureau is open 9.15 - 5.15 daily.

What we would like and have had until fairly recently was more volunteers to come and sort. We have over the past couple of years had a team of loyal supporters but age, illness and other commitments have now taken them away.

The RSGB does not tout the QSL bureau as a major selling point for membership; it is just one of a whole range of benefits of being an RSGB member. The main reason an amateur should be a member is that the RSGB is the *de facto* trade union for amateur radio. We look after all amateurs interests not just our members and have done so since 1913!

On a final point regarding the bureau. Surveys of members carried out over the last ten years show that only around 8 percent of our members actively use the bureau.

Question: How many full-time and part-time (not voluntary) members of staff are employed by the RSGB?

Answer: When I took up post in 1992 the staff at HQ numbered 42 Full time and 5 part time. Today we have 19 Full time and 6 part time.

We undertake far more work now than we did in 1992 and the organisation is lean and cost effective.

I would say that wouldn't I but then I am a little biased!!

What did all those people do in 1992. I'm not sure, you would have to ask my predecessors.

Situation Vacant.

As of the AGM in October David M0BQC has requested to be relieved of his secretarial duties. We are therefore looking for a new Secretary. We asked him to prepare a 'Job Spec.'

The Secretary's duties are as follows:-

- 1) Arranging speakers for Society meetings - initial contact with proposed speaker. Confirmation with details etc. Final reminder near date.
- 2) Various 'thank you' letters and letters of condolences.
- 3) Taking minutes at Committee meetings and preparing agendas. Issuing same to Newsletter Editor.
- 4) Prepare Secretary's annual report.
- 5) Receiving and responding to all enquiries to the G0MWT website.
- 6) Notification of Society events to many publications.

The Secretary is supported by a cohesive, co-operative and supportive Committee.

Interested?

Then contact our Chairman John G8DET.

Training Courses, Point of Contact

We are pleased to announce that Clive Ward M0SIX has agreed to be the point of contact for the Foundation and Intermediate courses from now on. Incidentally this is one of the duties previously undertaken by our Secretary (Sigh of relief from David BQC!).

Contact Clive for all your queries on:-

01245-224577 or 07860-418835.

Amateur of the Year

It's time to think about this award. You can nominate any Member who you consider has given outstanding service to the Club. Nominations to any Committee Member by August please.

Poetic Licence

As you all know Dave Penny G3PEN is a first rate raconteur. What you probably don't know is that he is also a bit of a poet, in the style of that well known entertainer Pam Ayres! Here are some of his Pam Ayresisms:-

"I'll be glad when DA is back on the air", he echoed, repeatedly.

"My hand-held has been left on for too long", George said, flatly.

"My electronic keyer does verrrrrry long dashes", Samuel sent, lingeringly.

"This new 2m omni is working well", Harry broadcast, widely.

Can you beat those, but no prizes?

A report on IMD will be included next month.